

Application No: 10/533,063

Amendment and Response dated August 9, 2010

Reply to Final Office Action of April 9, 2010

Docket No. P-7714 (102-680 PCT/US/RCE)

Page 2

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application.

Please amend the claims as follows:

1. (Currently amended) A method to immobilise at least one type of carbohydrate molecule comprising the steps of:

- i) providing a monomer source comprising one or more organic compounds which are capable of polymerization;
- ii) creating a plasma of said monomer source;
- iii) contacting a surface with said plasma to provide a plasma polymer coated surface;
- iv) contacting said plasma polymer coated surface with at least one type of biologically active carbohydrate molecule in its native form, wherein the plasma polymer coated surface is not modified prior to contacting with said carbohydrate molecule in its native form; and
- v) incubating said plasma polymer coated surface with said carbohydrate molecule in its native form, whereby the carbohydrate molecule is passively adsorbed, in the absence of albumin or salts, on the surface and thereby immobilised, such that the carbohydrate molecule remains in its native form, is not contaminated and retains its biological activity.

2. (Cancelled)

3. (Previously presented) A method as claimed in claim 1 wherein the carbohydrate is provided as a solution comprising at least one carbohydrate molecule.

4. (Previously presented) A method as claimed in claim 1 wherein the monomer is a volatile alcohol.

Application No: 10/533,063

Amendment and Response dated August 9, 2010

Reply to Final Office Action of April 9, 2010

Docket No. P-7714 (102-680 PCT/US/RCE)

Page 3

5. (Previously presented) A method as claimed in claim 1 wherein the monomer is a volatile amine.

6. (Previously presented) A method as claimed in claim 1 wherein the monomer is a volatile hydrocarbon.

7. (Previously presented) A method as claimed in claim 1 wherein the monomer is a volatile acid.

8. (Previously presented) A method as claimed in claim 1 wherein the surface comprises a polymer comprising a nitrogen content of at least 2%.

9. (Original) A method as claimed in claim 8 wherein the nitrogen content is 2-20%.

10. (Previously presented) A method as claimed in claim 1 wherein the surface comprises a polymer comprising a nitrogen content greater than 20%.

11. (Previously presented) A method as claimed in claim 1 wherein the monomer contains a hydroxyl, amino or carboxylic acid group.

12. (Original) A method as claimed in claim 10 wherein the monomer is allylamine.

13. (Previously presented) A method as claimed in claim 1 wherein the monomer has a vapour pressure of at least 6.6×10^{-2} mbar at ambient room temperature.

14. (Previously presented) A method as claimed in claim 1 wherein the plasma polymer is deposited from a plasma of W/FM of $< 10^9$ J/Kg.

Application No: 10/533,063

Amendment and Response dated August 9, 2010

Reply to Final Office Action of April 9, 2010

Docket No. P-7714 (102-680 PCT/US/RCE)

Page 4

15. (Previously presented) A method as claimed in claim 1 wherein the polymer comprises an amine co-polymer.

16. (Previously presented) A method as claimed in claim 15 wherein the co-polymer is prepared by the plasma polymerization of an organic amine with a saturated or an unsaturated hydrocarbon of up to 20 carbons.

17. (Previously presented) A method as claimed in claim 38 wherein the carbohydrate is a homopolysaccharide.

18. (Previously presented) A method as claimed in claim 38 wherein the carbohydrate is a heteropolysaccharide.

19. (Original) A method as claimed in claim 18 wherein the heteropolysaccharide is a glycosaminoglycan.

20. (Original) A method as claimed in claim 19 wherein the glycosaminoglycan is selected from the group consisting of: hyaluronan; dermatan sulfate; chondroitin sulphate; heparin; heparan sulphate; or keratan sulphate.

21. (Previously presented) A method as claimed in claim 1 wherein the surface is part of a biosensor.

22. (Previously presented) A method as claimed in claim 1 wherein the surface is part of a therapeutic vehicle.

23. (Previously presented) A method as claimed in claim 1 wherein the surface is part of a device wherein said device is used in the collection of biological samples from an animal.

Application No: 10/533,063

Amendment and Response dated August 9, 2010

Reply to Final Office Action of April 9, 2010

Docket No. P-7714 (102-680 PCT/US/RCE)

Page 5

24. (Previously presented) A method as claimed in claim 1 wherein the surface is part of an affinity purification matrix.

25. (Previously presented) A method as claimed in claim 1 wherein the surface is part of a microarray.

26-32. (Cancelled)

33. (Previously presented) A method as claimed in claim 1 wherein the plasma polymer is deposited from a plasma of W/FM of $< 10^8$ J/Kg.

34. (Previously presented) A method as claimed in claim 1 wherein the plasma polymer is deposited from a plasma of W/FM of $< 10^7$ J/Kg.

35. (Previously presented) A method as claimed in claim 16 wherein the saturated hydrocarbon is an alkane.

36. (Previously presented) A method as claimed in claim 16 wherein the unsaturated hydrocarbon is selected from a group consisting of an alkene, a diene, and an alkyne.

37. (Previously presented) A method as claimed in claim 23 wherein the animal is a human.

38. (Previously presented) A method as claimed in claim 1 wherein the carbohydrate is a polysaccharide.